

REMARKS

I Formal Matters

The Examiner has rejected claims 23-28 and 32-35 under 35 U.S.C. § 112, first paragraph, as allegedly lacking written description.

By this Amendment, claims 28 and 33 are amended; claims 51-60 are new; claims 23-27, 32, and 34-35 are cancelled. No new matter has been introduced by this Amendment. Support for the Amendments to the claims may be found as follows:

Claim	Claim Limitation	Support
28	isolated or synthetic	page 27, line 20
	an amino acid sequence that is a fragment of the following amino acid sequence	page 5, lines 30-34
	sequence	Figures 7F-7I
	wherein said fragment comprises at least one amino acid sequence selected from the group consisting of residues 37-130, residues 211-289, residues 488-530, residues 490-620, residues 680-700, residues 1-530, residues 34-530, residues 531-877 of an envelope glycoprotein of LAV _{MAL} virus	page 23, lines 12-30
33	isolated, HIV-1 Env peptide	page 23, last paragraph, lines 31-35
	an amino acid sequence that is a fragment of the following amino acid sequence	page 5, lines 30-34
	sequence	Figures 7F-7I
	the peptide comprises all of the following conserved sequences: positions 37-130, 211-289, 488-530, 490-620, and 680-700 of an envelope glycoprotein of LAV _{MAL} virus	page 23, lines 12-30
51	glycoprotein	page 22, lines 29-32
52	residues 37-130	page 23, line 25
53	residues 211-289	page 23, line 26
54	residues 488-530	page 23, line 27
55	residues 490-620	page 23, line 30
56	residues 680-700	page 23, line 23
57	residues 1-530	page 23, line 18
58	residues 34-530	page 23, line 20

Claim	Claim Limitation	Support
59	residues 531-877	page 23, line 22
60	residues 37-130, 211-289, 488-530, 490-620, and 680-700 of an envelope glycoprotein of LAV _{MAL} virus	page 23, lines 12-30

Based on the above Amendments and the following arguments, Applicants respectfully request the Examiner reconsider all the outstanding rejections.

II Written Description Rejection

The Examiner has rejected claims 23-28 and 32-35 under 35 U.S.C. § 112, first paragraph, as allegedly lacking written description. The Examiner argues that claims 23-28 and 32-35 contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The Examiner provides three reasons for his conclusion. First, he argues that the disclosure fails to identify any specific HIV-1_{MAL} immunogenic fragments of the claimed lengths and substitutions. Second, the Examiner argues that the disclosure fails to perform any type of comparison, wherein specific immunogenic fragments from isolate MAL are identified and acceptable amino acid substitutions are performed. Third, the Examiner alleges that the disclosure fails to provide adequate support for MAL-specific polypeptides of the recited lengths.

Applicants have previously presented arguments against this rejection and have also provided the Declaration of Dr. Marie-Lise Gougeon in support of these arguments. While Applicants maintain all of the prior arguments, Applicants have amended the claims in accordance with the Examiner's suggestions.

Claim 28 is amended to recite a method of eliciting neutralizing antibodies to HIV in a mammal comprising providing a composition comprising at least one isolated or synthetic peptide. The peptide comprises an amino acid sequence that is a fragment of an Env sequence. The sequence finds support in Figure 7. The fragment further comprises at least one amino acid sequence selected from the group consisting of residues 37-130, 211-289, 488-530, 490-620, 680-700, 1-530, 34-530, and 531-877 of an envelope glycoprotein of LAV_{MAL} virus.

Claim 33 is amended to recite a method of eliciting neutralizing antibodies to HIV in a mammal comprising preparing a vaccine comprising at least one isolated, HIV-1 Env peptide. The peptide comprises an amino acid sequence that is a fragment of an Env sequence. The sequence also finds support in Figure 7. The peptide further comprises all of residues 37-130, 211-289, 488-530, 490-620, and 680-700 of an envelope glycoprotein of LAV_{MAL} virus.

New claims 52 to 60 depend on claim 28. Each claim recites limitations of different residues which the fragment comprises. The limitations are recited in claim 28 and supported by the Specification as identified above.

Claim 28 and 33 are directed to a method of eliciting neutralizing antibodies against HIV. The method comprises preparing a vaccine or composition by providing a peptide which contains at least one or all of the conserved regions of an envelope glycoprotein of LAV_{MAL} virus. The correlation between the conserved region and the function of the peptide is supported by the Specification and also by the Declaration of Dr. Marie-Lise Gougeon (see Declaration page 4 , point 13). Moreover, Applicants

would like to direct Examiner's attention to U.S. Patent No. 5,030,714, in which parallel isolated or synthetic peptides to those used in the presently claimed methods were found patentable. Applicants believe that a method claim of eliciting neutralizing antibodies against HIV by providing such peptides should also be patentable. Applicants submit that the present claims have sufficient written description support as identified above. Applicants' position is also supported by issued U.S. Patent No. 5,030,714. Therefore, it is respectfully requested that the Examiner enter this Amendment.

III. Conclusion

Applicants submit that the proposed amendments do not raise new issues or necessitate the undertaking of any additional search by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Applicants also submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that his claimed invention, as amendment is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of the Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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